



SEQUENCE LISTING

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COLLINGWOOD, Trevor

<120> TARGETED MODIFICATION OF CHROMATIN STRUCTURE

<130> 8325-0014 / S14-US1

<140> 09/844,508
<141> 2001-04-27

<150> 60/200,590
<151> 2000-04-28

<150> 60/228,523
<151> 2000-08-28

<160> 49

<170> PatentIn Ver. 2.0

<210> 1
<211> 9
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Veg 1 target
site 3' to 5'

<400> 1
ccccctccta

9

<210> 2
<211> 9
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Veg 1 target
site 5' to 3'

<400> 2
ggggaggat

9

<210> 3
<211> 7
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Veg 1 AA
sequence F1

<400> 3
Thr Thr Ser Asn Leu Arg Arg
1 5

<210> 4
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Veg 1 AA
sequence F2

<400> 4
Arg Ser Ser Asn Leu Gln Arg
1 5

<210> 5
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Veg 1 AA
sequence F3

<400> 5
Arg Ser Asp His Leu Ser Arg
1 5

<210> 6
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Veg 3a target
site

<400> 6
gcggaggct 9

<210> 7
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Veg 3a AA
sequence F1

<400> 7
Gln Ser Ser Asp Leu Gln Arg
1 5

<210> 8
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Veg 3a AA sequence F2

<400> 8
Arg Ser Ser Asn Leu Gln Arg
1 5

<210> 9
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Veg 3a AA sequence F3

<400> 9
Arg Ser Asp Glu Leu Ser Arg
1 5

<210> 10
<211> 298
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Veg1 nucleotide sequence

<400> 10
ggtaccata cctggcaaga agaaggcagca catctgccac atccagggct gtggtaaagt 60
ttacggcaca acctcaaatc tgcgtcgta cctgcgctgg cacaccggcg agaggccttt 120
catgtgtacc tggtcctact gtggtaaacg cttcacccgt tcgtcaaacc tgca gca gtc 180
caagcgtacc cacaccggtg agaagaaatt tgcttgcccg gagtgccga agcgcttcat 240
gcgttagtgac cacctgtccc gtcacatcaa gaccaccag aataagaagg gtggatcc 298

<210> 11
<211> 99
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Veg1 amino acid sequence

<400> 11
Val Pro Ile Pro Gly Lys Lys Lys Gln His Ile Cys His Ile Gln Gly
1 5 10 15

Cys Gly Lys Val Tyr Gly Thr Thr Ser Asn Leu Arg Arg His Leu Arg
20 25 30

Trp His Thr Gly Glu Arg Pro Phe Met Cys Thr Trp Ser Tyr Cys Gly
35 40 45

Lys Arg Phe Thr Arg Ser Ser Asn Leu Gln Arg His Lys Arg Thr His
50 55 60

Thr Gly Glu Lys Lys Phe Ala Cys Pro Glu Cys Pro Lys Arg Phe Met
65 70 75 80

Arg Ser Asp His Leu Ser Arg His Ile Lys Thr His Gln Asn Lys Lys
85 90 95

Gly Gly Ser

<210> 12
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: duplex oligonucleotide binding target 5'-3'

<400> 12
catgcatagc ggggaggatc gccatcgat 29

<210> 13
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: NLS derived SV40 large T-antigen

<400> 13
Met Ala Pro Lys Lys Lys Arg Lys Val Gly Ile His Gly Val
1 5 10

<210> 14

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<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
      double-stranded oligonucleotide encoding a FLAG
      epitope

<400> 14
Asp Tyr Lys Asp Asp Asp Asp Lys
1           5

<210> 15
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: target site
      for human VEGF-A

<400> 15
ggggaggatc gcggaggct                               19

<210> 16
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: linker
      sequence

<400> 16
Asp Gly Gly Gly Ser
1           5

<210> 17
<211> 298
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Veg3a
      nucleotide sequence

<400> 17
ggtacccata cctggcaaga agaagcagca catctgccac atccagggct gtggtaaagt 60
ttacggccag tcctccgacc tgcagcgtca cctgcgctgg cacaccggcg agaggcctt 120
catgtgtacc tggtcctact gtggtaaacf cttcacccgt tcgtcaaacc tacagaggca 180
caagcgtaca cacaccggtg agaagaaatt tgctgccccg gagtgtccga agcgcttcat 240

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gcgaagtgac gagctgtcac gacatatcaa gaccaccag aacaagaagg gtggatcc 298
<210> 18
<211> 99
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Veg3a amino acid sequence

<400> 18
Val Pro Ile Pro Gly Lys Lys Lys Gln His Ile Cys His Ile Gln Gly
1 5 10 15

Cys Gly Lys Val Tyr Gly Gln Ser Ser Asp Leu Gln Arg His Leu Arg
20 25 30

Trp His Thr Gly Glu Arg Pro Phe Met Cys Thr Trp Ser Tyr Cys Gly
35 40 45

Lys Arg Phe Thr Arg Ser Ser Asn Leu Gln Arg His Lys Arg Thr His
50 55 60

Thr Gly Glu Lys Lys Phe Ala Cys Pro Glu Cys Pro Lys Arg Phe Met
65 70 75 80

Arg Ser Asp Glu Leu Ser Arg His Ile Lys Thr His Gln Asn Lys Lys
85 90 95

Gly Gly Ser

<210> 19
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Veg3a DNA target site

<400> 19
catgcata tc gcggaggctt ggcatcgat 29

<210> 20
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer SPE7

<400> 20
gagcagaatt cgccaagaag aagcagcac 29

<210> 21
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer
SPEamp12

<400> 21
gtggtctaga cagctcgta cttcgc 26

<210> 22
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer
SPEamp13

<400> 22
ggagccaagg ctgtggtaaa gtttacgg 28

<210> 23
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer
SPEamp11

<400> 23
ggagaagctt ggatcctcat tatccc 26

<210> 24
<211> 77
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: fragment
encoding DGGGS linker, 5' to 3'

<400> 24
ctagacacat caaaaacccac cagaacaaga aagacggcgg tggcagcggc aaaaagaaac 60
agcacatatg tcacatc 77

<210> 25
<211> 77

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<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: fragment
      encoding DGGGS linker, 3' to 5'

<400> 25
tgtgtagtt tgggttgtct tgttctttct gccgccaccg tcgcccgttt tctttgtcgt 60
gtatacagtg tagttc                                77

<210> 26
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer GB19

<400> 26
gccatgccgg tacccataacc tggcaagaag aagcagcac      39
                                         39

<210> 27
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer GB10

<400> 27
cagatcggtt ccacccttct tattctggtg ggt      33
                                         33

<210> 28
<211> 589
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Veg3a/1
      nucleotide sequence

<400> 28
ggtaaccata cctggcaaga agaaggcagca catctgccac atccagggt gtggtaaagt 60
ttacggccag tcctccgacc tgcagcgtca cctgcgctgg cacaccggcg agaggcctt 120
catgtgtacc tggtcctact gtggtaaacf cttcacacgt tcgtcaaacc tacagaggca 180
caagcgtaca cacacagggtg agaagaaatt tgcttgcccg gagtgcgtcgaa agcgcttcat 240
gcgaagtgtac gagctgtcta gacacatcaa aaccaccagg aacaagaaag acggcggtgg 300
cagcggcaaa aagaaacagc acatatgtca catccaaggc tggtaaag tttacggcac 360
aacctcaaat ctgcgtcgac acctgcgtc gcacaccggc gagaggcctt tcgtgtac 420
ctggtcctac tgtggtaaac gcttcacccg ttcgtcaaac ctgcagcgtc acaagcgtac 480
ccacaccgggt gagaagaaat ttgcttgccc ggagtgtccg aagcgcttca tgcgtagtga 540
ccacacctgtcc cgtcacatca agacccacca gaataagaag ggtggatcc      589

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<210> 29
 <211> 196
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Veg3a/1 amino acid sequence

<400> 29
 Val Pro Ile Pro Gly Lys Lys Gln His Ile Cys His Ile Gln Gly
 1 5 10 15

Cys Gly Lys Val Tyr Gly Gln Ser Ser Asp Leu Gln Arg His Leu Arg
 20 25 30

Trp His Thr Gly Glu Arg Pro Phe Met Cys Thr Trp Ser Tyr Cys Gly
 35 40 45

Lys Arg Phe Thr Arg Ser Ser Asn Leu Gln Arg His Lys Arg Thr His
 50 55 60

Thr Gly Glu Lys Lys Phe Ala Cys Pro Glu Cys Pro Lys Arg Phe Met
 65 70 75 80

Arg Ser Asp Glu Leu Ser Arg His Ile Lys Thr His Gln Asn Lys Lys
 85 90 95

Asp Gly Gly Ser Gly Lys Lys Gln His Ile Cys His Ile Gln
 100 105 110

Gly Cys Gly Lys Val Tyr Gly Thr Thr Ser Asn Leu Arg Arg His Leu
 115 120 125

Arg Trp His Thr Gly Glu Arg Pro Phe Met Cys Thr Trp Ser Tyr Cys
 130 135 140

Gly Lys Arg Phe Thr Arg Ser Ser Asn Leu Gln Arg His Lys Arg Thr
 145 150 155 160

His Thr Gly Glu Lys Lys Phe Ala Cys Pro Glu Cys Pro Lys Arg Phe
 165 170 175

Met Arg Ser Asp His Leu Ser Arg His Ile Lys Thr His Gln Asn Lys
 180 185 190

Lys Gly Gly Ser
 195

<210> 30
 <211> 42
 <212> DNA
 <213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence: Veg3a/1
      target site 1

<400> 30
agcgagcggg gaggatcgcg gaggcttggg gcagccgggt ag          42

<210> 31
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Veg3a/1
      target site 2

<400> 31
tcgccccctcc tagcgccctcc gaaccccgtc ggcccatctc gc          42

<210> 32
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VEGF forward
      primer

<400> 32
ctggtagcgg ggaggatcg                                19

<210> 33
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VEGF reverse
      primer

<400> 33
gccacgacct ccgagctac                                19

<210> 34
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VEGF probe

<400> 34
ctacccggct gccccaaagcc tc                            22

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<210> 35
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: GAPDH forward
      primer

<400> 35
cctttgcag accacagtcc a                                21

<210> 36
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: GAPDH reverse
      primer

<400> 36
gcagggatga tgttctggag a                                21

<210> 37
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: GAPDH probe

<400> 37
cactgccacc cagaagactg tgg                                23

<210> 38
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: ISWI primer 1

<400> 38
cgatcggttc ctccaaaaca gatacagctg cc                                32

<210> 39
<211> 77
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: ISWI primer 2

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<400> 39
gatcgccctc agactcgaga agcttacttg tcatcgctgt cctttagtc gctgcccttc 60
ttcttcttt tcgagtt 77

<210> 40
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Epo2c target site

<400> 40
ggtgaggagt 10

<210> 41
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Epo2c recognition helix F1

<400> 41
Arg Ser Asp Asn Ala Leu Arg
1 5

<210> 42
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Epo2c recognition helix F2

<400> 42
Arg Ser Asp Asn Leu Ala Arg
1 5

<210> 43
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Epo2c recognition helix F3

<400> 43

Asp Ser Ser Lys Leu Ser Arg
1 5

<210> 44
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Epo3b target site

<400> 44
gcgggtggctc 10

<210> 45
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Epo3b recognition helix F1

<400> 45
Gln Ser Ser Asp Leu Thr Arg
1 5

<210> 46
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Epo3b recognition helix F2

<400> 46
Arg Ser Asp Ala Leu Ser Arg
1 5

<210> 47
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Epo3b recognition helix F3

<400> 47

Arg Ser Asp Glu Arg Lys Arg
1 5

<210> 48

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: SRC1 primer 1

<400> 48

ggatccggcc accgcggccg catggatcca tgtaatacaa acccaacc

48

<210> 49

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: SRC1 primer 2

<400> 49

atgaattcgc ggccgccctg gttccatct gttctgttt tgag

44